

AMENDMENTS TO CLAIMS

1. (Currently amended) An information recording apparatus comprising: temporary storage means temporarily storing data in a data recordable information recording medium on the occasion of recording and/or reproduction; and control means dividing a storage area of said temporary storage means to a plurality of areas according to a mode of recording the data in said information recording medium, wherein:

recording means for recording data in the recording area of said information recording medium and reproducing means for reproducing data recorded in the recording area of the information recording medium are provided;

said control means divides the storage area of said temporary storage means into at least a recording data storage area storing data to record in the information recording medium and a reproduced data storage area storing data reproduced from the information recording medium; storing the data to record in the information recording medium in said recording data storage area; and, when a reproduction request is received during recording by said recording means, said reproducing means is made to store data reproduced from the information recording medium in said reproduced data storage area; and

said recording means keeps a waiting state of waiting before starting data recording until a data occupation amount in said recording data storage area reaches a predetermined threshold, enters a recording state starting the data recording when the data occupation amount exceeds the predetermined threshold, and records data in the recording area of the information recording medium; and

means for immediately causing the reproducing means to reproduce data when a reproduction request is received during the waiting state is provided.

2. (Original) The information recording apparatus as claimed in claim 1, wherein: said control means comprises means for storing data in a respective predetermined buffering manner in each area.

3. (Original) The information recording apparatus as claimed in claim 1, wherein: said control means comprises means for storing data in at least one of the respective areas in a ring buffering manner.

4. (Original) The information recording apparatus as claimed in claim 1, wherein: said temporary storage means comprises means for storing data in a ring buffering manner in which a ring start pointer and a ring end pointer can be set, and said control means comprises means for storing data in the ring buffering manner in at least one of the respective areas with setting the ring start pointer and the ring end pointer.

5. (Original) The information recording apparatus as claimed in claim 1, wherein: recording means for recording data in the recording area of the information recording medium and verifying means for carrying out verification processing of reproduced data from the recording area after being recorded by said recording means and detecting a defect are provided;

 said control means divides the storage area of the temporary storage means into at least a recording data storage area storing data to record in said information recording medium and a verification storage area storing data reproduced by said verifying means; data to record in the information recording medium is stored in said recording data storage area; and the recorded data reproduced by the verifying means is stored in said verification storage area.

6. (Original) The information recording apparatus as claimed in claim 5, wherein: said control means comprises means for holding the data stored in the recording data storage area until verification processing by said verifying means is completed.

7. (Currently amended) The information recording apparatus as claimed in claim 5, wherein: said control means comprises means for holding at least data of the data stored in the recording data storage area from among the data stored in said recording data storage area, and said at least data to hold is one for which verification processing by said verifying means is not completed.

8. (Original) The information recording apparatus as claimed in claim 5, wherein: said control means comprises means for setting a size of said verification storage area so that said size becomes smaller than the recording data storage area.

9. (Canceled)

10. (Currently amended) The information recording apparatus as claimed in claim [[9]] 1, wherein: said recording means records data sequentially in the recording area of the information recording medium.

11. (Canceled)

12. (Currently amended) The information recording apparatus as claimed in claim [[9]] 1, wherein: ~~said recording means keeps a waiting state of waiting before starting data recording until a data occupation amount in said recording data storage area reaches a predetermined threshold, enters a recording state starting the data recording when the data occupation amount exceeds the predetermined threshold, and records data in the recording area of the information recording medium; and means for causing the reproducing means to reproduce data after waiting for at least a completion of recording of continuously recordable data of the data in said recording data storage area when a reproduction request is received during the recording state is provided.~~

13. (Currently amended) The information recording apparatus as claimed in claim [[9]] 1, wherein: ~~said recording means keeps a waiting state of waiting before starting data recording until a data occupation amount in said recording data storage area reaches a predetermined threshold, enters a recording state starting the data recording when the data occupation amount exceeds the predetermined threshold, and records data in the recording area of the information recording medium; and means for transferring the data from the recording data storage area to a reproduction request sender when the recording means receives a reproduction request from a~~

recording area to record the data from said recording data storage area during the waiting state is provided.

14. (Currently amended) The information recording apparatus as claimed in claim [[9]] 1, wherein: said control means comprises means for setting a size of said reproduced data storage area so that said size becomes smaller than the recording data storage area.

15. (Currently amended) An information recording method comprising: a control step of dividing a storage area of a temporary storage means temporarily storing data in a data recordable information recording medium on the occasion of recording and/or reproduction, into a plurality of areas according to a mode of recording of the data in said information recording medium, wherein:

a recording step of recording data in the recording area of said information recording medium and a reproducing step of reproducing data recorded in the recording area of the information recording medium are provided; and said control step comprises a step of dividing the storage area of said temporary storage means into at least a recording data storage area storing data to record in the information recording medium and a reproduced data storage area storing data reproduced from the information recording medium; and, when a reproduction request is received during recording in said recording step, data reproduced from the information recording medium is stored in said reproduced data storage area in said reproducing step,

said recording step comprises a step of keeping a waiting state of waiting before starting data recording until a data occupation amount in said recording data storage area reaches a predetermined threshold, entering a recording state starting the data recording when the data occupation amount exceeds the predetermined threshold, and recording data in the recording area of the information recording medium; and a step of immediately reproducing data in the reproducing step when a reproduction request is received during the waiting state in the recording step, is provided.

16. (Original) The information recording method as claimed in claim 15, wherein: said control step comprises a step of storing data in a respective predetermined buffering manner in each area.

17. (Original) The information recording method as claimed in claim 15, wherein: said control step comprises a step of storing data in at least one of the respective areas in a ring buffering manner.

18. (Original) The information recording method as claimed in claim 15, wherein: said control step comprises a step of storing data in a ring buffering manner in which a ring start pointer and a ring end pointer can be set, and data is stored in the ring buffering manner in at least one of the respective areas with setting the ring start pointer and the ring end pointer.

19. (Original) The information recording method as claimed in claim 15, wherein: a recording step of recording data in the recording area of the information recording medium and a verifying step of carrying out verification processing of reproduced data from the recording area after being recorded in said recording step and detecting a defect are provided; said control step comprises a step of dividing the storage area of the temporary storage means into at least a recording data storage area storing data to record in said information recording medium and a verification storage area storing data reproduced by said verifying step; the data to record in the information recording medium is stored in said recording data storage area, and the recorded data reproduced by the verifying step is stored in said verification storage area.

20. (Original) The information recording method as claimed in claim 19, wherein: said control step comprises a step of holding the data stored in the recording data storage area until the verification processing by said verifying step is completed.

21. (Original) The information recording method as claimed in claim 19, wherein: said control step comprises a step of holding at least data of the data stored in the recording data storage

area from among the data stored in said recording data storage area, and said at least data to hold is one for which the verification processing by said verifying step is not completed.

22. (Original) The information recording method as claimed in claim 19, wherein: said control step comprises a step of setting a size of said verifying storage area so that said size becomes smaller than the recording data storage area.

23. (Canceled)

24. (Currently amended) The information recording method as claimed in claim [[23]] 15, wherein: said recording step comprises a step of recording data sequentially in the recording area of the information recording medium.

25. (Canceled)

26. (Currently amended) The information recording method as claimed in claim [[23]] 15, wherein: said recording step comprises a step of keeping a waiting state of waiting before starting data recording until a data occupation amount in said recording data storage area reaches a predetermined threshold, entering a recording state starting the data recording when the data occupation amount exceeds the predetermined threshold, and recording data in the recording area of the information recording medium; and a step of reproducing data in the reproducing step after waiting for at least a completion of recording continuously recordable data of the data in said recording data storage area when a reproduction request is received during the recording state in the recording step, is provided.

27. (Currently amended) The information recording method as claimed in claim [[23]] 15, wherein: said recording step comprises a step of keeping a waiting state of waiting before starting data recording until a data occupation amount in said recording data storage area reaches a predetermined threshold, entering a recording state starting the data recording when the data

~~occupation amount exceeds the predetermined threshold, and recording data in the recording area of the information recording medium; and a step of transferring the data from the recording data storage area to a reproduction request sender when a reproduction request from a recording area to record the data from said recording data storage area is received during the waiting state in the recording step is provided.~~

28. (Currently amended) The information recording method as claimed in claim [[23]] 15, wherein: said control step comprises a step of setting a size of said reproduced data storage area so that said size becomes smaller than the recording data storage area.

29. (Currently amended) A recording medium recording a program for causing a computer to execute a control step of dividing a storage area of temporary storage means temporarily storing data in data recordable information recording medium on the occasion of recording and/or reproduction, into a plurality of areas according to a mode of recording of the data in said information recording medium, wherein:

a recording step of recording data in the recording area of said information recording medium and a reproducing step of reproducing data recorded in the recording area of the information recording medium are provided; and said control step comprises a step of dividing the storage area of said temporary storage means into at least a recording data storage area storing data to record in the information recording medium and a reproduced data storage area storing data reproduced from the information recording medium; and, when a reproduction request is received during recording in said recording step, data reproduced from the information recording medium is stored in said reproduced data storage area in said reproducing step; and

said recording step comprises a step of keeping a waiting state of waiting before starting data recording until a data occupation amount in said recording data storage area reaches a predetermined threshold, entering a recording state starting the data recording when the data occupation amount exceeds the predetermined threshold, and recording data in the recording area of the information recording medium; and a step of immediately reproducing data in the reproducing

step when a reproduction request is received during the waiting state in the recording step, is provided.

30. (Original) The recording medium recording the program claimed in claim 29, wherein: said control step comprises a step of storing data in a respective predetermined buffering manner in each area.

31. (Currently amended) The recording medium recording the program claimed in claim 29, wherein: said control step comprises a step of storing data in at least one of the respective areas in a ring buffering manner.

32. (Original) The recording medium recording the program claimed in claim 29, wherein: said control step comprises a step of storing data in a ring buffering manner in which a ring start pointer and a ring end pointer can be set, and data is stored in the ring buffering manner in at least one of the respective areas with setting the ring start pointer and the ring end pointer.

33. (Original) The recording medium recording the program claimed in claim 29, wherein: a recording step of recording data in the recording area of the information recording medium and a verifying step of carrying out verifying processing of reproducing data from the recording area after being recorded in said recording step and detecting a defect are provided; said control step comprises a step of dividing the storage area of the temporary storage means into at least a recording data storage area storing data to record in said information recording medium and a verification storage area storing data reproduced by said verifying step; the data to record in the information recording medium is stored in said recording data storage area; and the recorded data reproduced by the verifying step is stored in said verification storage area.

34. (Original) The recording medium recording the program claimed in claim 33, wherein: said control step comprises a step of holding the data stored in the recording data storage area until the verification processing by said verifying step is completed.

35. (Original) The recording medium recording the program claimed in claim 33, wherein: said control step comprises a step of holding at least data of the data stored in the recording data storage area from among the data stored in said recording data storage area, and said at least data to hold is one for which the verification processing by said verifying step is not completed.

36. (Original) The recording medium recording the program claimed in claim 33, wherein: said control step comprises a step of setting a size of said verifying storage area so that said size becomes smaller than the recording data storage area.

37. (Canceled)

38. (Currently amended) The recording medium recording the program claimed in claim [[37]] 29, wherein: said recording step comprises a step of recording data sequentially in the recording area of the information recording medium.

39. (Canceled)

40. (Currently amended) The recording medium recording the program claimed in claim [[37]] 29, wherein: ~~said recording step comprises a step of keeping a waiting state of waiting before starting data recording until a data occupation amount in said recording data storage area reaches a predetermined threshold, entering a recording state starting the data recording when the data occupation amount exceeds the predetermined threshold, and recording data in the recording area of the information recording medium; and a step of reproducing data in the reproducing step after waiting for at least a completion of recording continuously recordable data of the data in said recording data storage area when a reproduction request is received during the recording state in the recording step, is provided.~~

41. (Currently amended) The recording medium recording the program claimed in claim [[37]] 29, wherein: ~~said recording step comprises a step of keeping a waiting state of waiting before~~

starting data recording until a data occupation amount in said recording data storage area reaches a predetermined threshold, entering a recording state starting the data recording when the data occupation amount exceeds the predetermined threshold, and recording data in the recording area of the information recording medium; and a step of transferring the data from the recording data storage area to a reproduction request sender when a reproduction request from a recording area to record the data from said recording data storage area is received during the waiting state in the recording step is provided.

42. (Currently amended) The recording medium recording the program claimed in claim [[37]] 29, wherein: said control step comprises a step of setting a size of said reproduced data storage area so that said size becomes smaller than the recording data storage area.